

THAT WHICH IS CLAIMED:

1. A method for manufacturing a screen cylinder, comprising:
fastening a plurality of longitudinally-extending screen wires at lateral intervals about a plurality of ring-shaped support rods, each support rod defining an axis extending therethrough and the support rods being arranged in spaced-apart relation such that the axes thereof are coaxially disposed to define a screen cylinder axis, and such that the screen wires cooperate with the support rods to form a cylindrical screen surface of the screen cylinder, the screen surface having opposed ends, and at least one of the support rods being disposed about one of the ends of the screen surface;
and
mounting an end ring to the at least one of the support rods closest to one of the ends of the screen surface, in a shrink fit therebetween, whereby a force resulting from the shrink fit is directed substantially perpendicularly to the screen cylinder axis, and acting between the end ring and the at least one of the support rods, secures the screen cylinder surface in substantially immobile relation relative to the end ring via the at least one of the support rods.
2. A method as claimed in claim 1, wherein arranging the screen wires further comprises arranging the screen wires inside the ring-shaped support rods to form the cylindrical screen surface inside the ring-shaped support rods, and wherein mounting the end ring further comprises mounting the end ring to the at least one of the support rods such that at least a portion of an inner circumference of the end ring forms the shrink fit with an outer circumference of the at least one of the support rods, and such that the force resulting from the shrink fit is directed substantially perpendicularly to the screen cylinder axis, in at least one of a direction from the at least one of the support rods toward the end ring and a direction from the end ring toward the at least one of the support rods, to secure the screen cylinder surface in substantially immobile relation relative to the end ring via the at least one of the support rods.

3. A method as claimed in claim 2, further comprising forming the shrink fit between the end ring and the at least one of the support rods by:

at least one of radially expanding the end ring and radially contracting the at least one of the support rods;

mounting the end ring to the at least one of the support rods such that at least a portion of the inner circumference of the end ring surrounds the outer circumference of the at least one of the support rods; and

at least one of radially contracting the end ring and radially expanding the at least one of the support rods so as to form the shrink fit therebetween.

4. A method as claimed in claim 3, wherein radially expanding the end ring further comprises heating the end ring, and radially contracting the end ring further comprises at least one of cooling the end ring and allowing the end ring to cool.

5. A method as claimed in claim 1, wherein arranging the screen wires further comprises arranging the screen wires outside the ring-shaped support rods to form the cylindrical screen surface outside the ring-shaped support rods, and wherein mounting the end ring further comprises mounting the end ring to the at least one of the support rods such that at least a portion of an outer circumference of the end ring forms the shrink fit with an inner circumference of the at least one of the support rods, and such that the force resulting from the shrink fit is directed substantially perpendicularly to the screen cylinder axis, in a direction from the at least one of the support rods toward the end ring, to secure the screen cylinder surface in substantially immobile relation relative to the end ring via the at least one of the support rods.

6. A method as claimed in claim 5, further comprising forming the shrink fit between the end ring and the at least one of the support rods by:

radially expanding the at least one of the support rods;

mounting the end ring to the at least one of the support rods such that at least a portion of the outer circumference of the end ring is surrounded by the inner circumference of the at least one of the support rods; and

radially contracting the at least one of the support rods so as to form the shrink fit between the end ring and the at least one of the support rods.

7. A method as claimed in claim 1, wherein the end ring defines at least one hole extending radially through the end ring toward the at least one of the support rods, and the method further comprises engaging a locking element with the at least one hole such that the locking element secures the end ring and the at least one of the support rods together.

8. A method as claimed in claim 1, further comprising forming a weld joint between at least a portion of the end ring and a corresponding portion of the at least one of the support rods so as to secure the end ring and the at least one of the support rods together.

9. A method for manufacturing a screen cylinder, comprising:
fastening a plurality of longitudinally-extending screen wires at lateral intervals along each of a plurality of elongate support rods;
forming each of the support rods into a ring shape such that each support rod defines an axis extending therethrough, the support rods being arranged in spaced-apart relation such that the axes thereof are coaxially disposed to define a screen cylinder axis, and such that the screen wires cooperate with the support rods to form a cylindrical screen surface of the screen cylinder, the screen surface having opposed ends, and at least one of the support rods being disposed about one of the ends of the screen surface;
and
mounting an end ring to the at least one of the support rods closest to one of the ends of the screen surface, in a shrink fit therebetween, whereby a force resulting from the shrink fit is directed substantially perpendicularly to the screen cylinder axis, and acting between the end ring and the at least one of the support rods, secures the screen cylinder surface in substantially

immobile relation relative to the end ring via the at least one of the supports rods.

10. A method as claimed in claim 9, wherein forming each of the support rods into a ring shape further comprises forming each of the support rods into a ring shape such that the screen wires are disposed inside the ring-shaped support rods to form the cylindrical screen surface inside the ring-shaped support rods, and wherein mounting the end ring further comprises mounting the end ring to the at least one of the support rods such that at least a portion of an inner circumference of the end ring forms the shrink fit with an outer circumference of the at least one of the support rods, and such that the force resulting from the shrink fit is directed substantially perpendicularly to the screen cylinder axis, in at least one of a direction from the at least one of the support rods toward the end ring and a direction from the end ring toward the at least one of the support rods, to secure the screen cylinder surface in substantially immobile relation relative to the end ring via the at least one of the support rods.

11. A method as claimed in claim 10, further comprising forming the shrink fit between the end ring and the at least one of the support rods by:

at least one of radially expanding the end ring and radially contracting the at least one of the support rods;

mounting the end ring to the at least one of the support rods such that at least a portion of the inner circumference of the end ring surrounds the outer circumference of the at least one of the support rods; and

at least one of radially contracting the end ring and radially expanding the at least one of the support rods so as to form the shrink fit therebetween.

12. A method as claimed in claim 11, wherein radially expanding the end ring further comprises heating the end ring, and radially contracting the end ring further comprises at least one of cooling the end ring and allowing the end ring to cool.

13. A method as claimed in claim 9, wherein forming each of the support rods into a ring shape further comprises forming each of the support rods into a ring shape such that the screen wires are disposed outside the ring-shaped support rods to form the cylindrical screen surface outside the ring-shaped support rods, and wherein mounting the end ring further comprises mounting the end ring to the at least one of the support rods such that at least a portion of an outer circumference of the end ring forms the shrink fit with an inner circumference of the at least one of the support rods, and such that the force resulting from the shrink fit is directed substantially perpendicularly to the screen cylinder axis, in a direction from the at least one of the support rods toward the end ring, to secure the screen cylinder surface in substantially immobile relation relative to the end ring via the at least one of the support rods.

14. A method as claimed in claim 13, further comprising forming the shrink fit between the end ring and the at least one of the support rods by:
radially expanding the at least one of the support rods;
mounting the end ring to the at least one of the support rods such that at least a portion of the outer circumference of the end ring is surrounded by the inner circumference of the at least one of the support rods; and
radially contracting the at least one of the support rods so as to form the shrink fit between the end ring and the at least one of the support rods.

15. A method as claimed in claim 9, wherein the end ring defines at least one hole extending radially through the end ring toward the at least one of the support rods, and the method further comprises engaging a locking element with the at least one hole such that the locking element secures the end ring and the at least one of the support rods together.

16. A method as claimed in claim 9, further comprising forming a weld joint between at least a portion of the end ring and a corresponding portion of the at least one of the support rods so as to secure the end ring and the at least one of the support rods together.

17. A screen cylinder for cleaning or screening fiber pulp, comprising:
a plurality of ring-shaped support rods, each support rod defining an axis
extending therethrough and the support rods being arranged in spaced-
apart relation such that the axes thereof are coaxially disposed to define a
screen cylinder axis;
a plurality of longitudinally-extending screen wires fastened at lateral intervals to
the support rods such that the screen wires cooperate with the support rods
to form a cylindrical screen surface of the screen cylinder, the screen
surface having opposed ends, with at least one of the support rods being
disposed about one of the ends of the screen surface; and
an end ring mounted to the at least one of the support rods closest to one of the
ends of the screen surface, in a shrink fit therebetween, such that a force
resulting from the shrink fit is directed substantially perpendicularly to the
screen cylinder axis, and acts between the end ring and the at least one of
the support rods, to secure the screen cylinder surface in substantially
immobile relation relative to the end ring via the at least one of the support
rods.

18. A screen cylinder as claimed in claim 17, wherein the screen wires
forming the screen surface are arranged inside the ring-shaped support rods to form the
cylindrical screen surface inside the ring-shaped support rods, and wherein the end ring is
mounted to the at least one of the support rods such that at least a portion of the inner
circumference of the end ring forms the shrink fit with an outer circumference of the at
least one of the support rods, and such that the force resulting from the shrink fit is
directed substantially perpendicularly to the screen cylinder axis, in at least one of a
direction from the at least one of the support rods toward the end ring and a direction
from the end ring toward the at least one of the support rods, to secure the screen cylinder
surface in substantially immobile relation relative to the end ring via the at least one of
the support rods.

19. A screen cylinder as claimed in claim 17, wherein the screen wires forming the screen surface are arranged outside the ring-shaped support rods to form the cylindrical screen surface outside the ring-shaped support rods, and wherein the end ring is mounted to the at least one of the support rods such that at least a portion of an outer circumference of the end ring forms the shrink fit with an inner circumference of the at least one of the support rods, and such that the force resulting from the shrink fit is directed substantially perpendicularly to the screen cylinder axis, in a direction from the at least one of the support rods toward the end ring, to secure the screen cylinder surface in substantially immobile relation relative to the end ring via the at least one of the support rods.

20. A screen cylinder as claimed in claim 17, wherein the end ring defines at least one hole extending radially through the end ring toward the at least one of the support rods, and the screen cylinder further comprises a locking element engaged with the at least one hole such that the locking element secures the end ring and the at least one of the support rods together.

21. A screen cylinder as claimed in claim 17, further comprising at least one weld joint formed between at least a portion of the end ring and a corresponding portion of the at least one of the support rods so as to secure the end ring and the at least one of the support rods together.